

Appendix A

Example Educational Brochures and Handouts

The following example urban forestry educational material is provided to augment the City of Carlsbad's current educational program. The provided examples should be used as templates that can be customized to meet City standards. The International Society of Arboriculture (ISA) offers a plethora of informational and educational flyers, brochures, and other media. These public relations media can be viewed at WWW.isa-arbor.com/publications/publications.html.

PLANNED LANDSCAPE

PLANNING FOR YOUR HOME

- To get started, sketch an outline of your house at the proper north-south orientation in the box below.
- Locate existing trees and shrubs, and assess their usefulness in your plan. Determine available space for planting additional trees.
- Identify your needs and apply the guidelines from this brochure.
- Select trees that will satisfy conditions specific to your yard. Contact your local cooperative extension agent or favorite garden center for suggestions on the variety of tree to plant, planting, and care.

OTHER BENEFITS FROM PLANTING TREES

- Less carbon dioxide and more oxygen. Trees remove carbon dioxide and add oxygen to the air. (This will help decrease global carbon dioxide levels, and help reduce the "greenhouse effect")
- Clean air. Trees remove dust and other pollutants from the air and make it healthier to breathe.
- Clean water. Trees and other plants reduce the amount of water flowing into the city's sewers, cutting the overflow at sewage treatment plants.
- Property values. Trees and other landscaping can increase property values 5 to 20%.
- Privacy. Trees screen unwanted views and noises.
- Wildlife. Trees provide food and shelter for birds and other animals.

For more information write:

Urban Forestry Information
USDA Forest Service
5 Radnor Corporate Ctr.
Suite 200
100 Masterson Road
Radnor, PA 19087

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PLANT A TREE
Where it counts!

USDA Forest Service
Northeastern Forest Experiment Station

Urban Forest Ecology
and Climatology Research
Syracuse, New York
University Park, Pennsylvania
Berkeley, California

"Caring for the land and serving people."

REDUCE ENERGY COSTS

The annual energy savings resulting from properly-placed plants around your home may be as high as 25%. Types of trees used and their locations in the yard depend on the area of the country you live in.

Plantings help cool your home in summer and may reduce heat loss in winter. In summer, trees and other plants absorb heat from the sun and cool residential areas by shading. During the winter, trees block cold winds. What follows are some guidelines for reducing energy costs while beautifying your home.

GENERAL CRITERIA FOR TREE SELECTION

- Identify the purpose of the tree.
- Consider tree shape. How fast will it grow? How tall will it grow? How far will the branches spread?
- Consider tree character. Does the tree have a dense canopy (more summer shade) or a sparse canopy (less summer shade). Do branches have an open pattern (less winter shade) or a dense pattern (more winter shade)?
- Consider tree maintenance. Is it easy to care for? Does the tree produce messy fruits?

SUMMER COOLING

- Plant tall trees (40-50 feet at maturity) 15 to 25 feet from the east and west sides of the house to shade roof and walls. Remove lower branches to allow summer breezes and winter sunlight to pass through.
- Shade your air conditioner to reduce its operational costs.

WINTER WARMING

- Drafts from leaky windows and poorly insulated walls make a house feel colder. Trees help reduce drafts by blocking cold winds.
- Trees should be planted along the north and west side of the yard or in the direction of prevailing winter winds.
- A row of evergreens, 25 feet from the house, will channel the wind away from your home. The spacing of trees will depend on the variety used.

- Use ground covers and plantings for site cooling.
- Shade paved surfaces to reduce heat build-up. Compare the summer temperatures in the above diagram; temperatures are higher on sides without vegetation. In addition, more sunshine will be reflected into the house, making it warmer.
- With those homes needing a windbreak on the south side of the house, trees should be planted farther away to prevent winter shade.
- Single-row windbreaks are effective, but multiple rows (up to 5) are better.

Direct economic benefits are usually associated with energy costs. Air conditioning costs are lower in a tree-shaded home. Heating costs are reduced when a home has a windbreak. Trees increase in value from the time they are planted until they mature. Trees are a wise investment of funds since landscaped homes are more valuable than non-landscaped homes. The savings in energy costs and the increase in property value directly benefit each homeowner.

The indirect economic benefits of trees are even greater. These are available in the community or region. Lowered electricity bills are paid by customers when power companies are able to use less water in their cooling towers, build fewer new facilities to meet peak demands, use reduced amounts of fossil fuel in their furnaces and need fewer measures to control air pollution. Communities can also save if fewer facilities must be built to control storm water in the region. To the individual, these savings are small, but to the community reductions in these expenses are often in the thousands of dollars.

Trees Require an Investment

Trees provide numerous aesthetic and economic benefits but also incur some costs. You need to be aware that an investment is required for your trees to provide the benefits that you desire. The biggest cost of trees and shrubs occurs when they are purchased and planted. Initial care almost always includes some watering. Leaf, branch and whole tree removal and disposal can be expensive.

To function well in the landscape, trees require maintenance. Much can be done by the informed homeowner. Corrective pruning and thinning will give trees a good start. Shade trees, however, quickly grow to a size that may require the services of a professional arborist. Arborists have the knowledge and equipment needed to prune, spray, fertilize and otherwise maintain a large tree. Your garden center owner, cooperative extension agent, community forester or consulting arborist can answer questions about tree maintenance, suggest treatments or recommend qualified arborists.

The PHC Alternative

Maintaining mature landscapes is a complicated undertaking. You may wish to consider a professional *Plant Health Care* (PHC) maintenance program which is now available from many landscape care companies. Their program is designed to

maintain plant vigor and should initially include inspections to detect and treat any existing problems which could be damaging or fatal. Thereafter, regular inspections and preventive maintenance will assure plant health and beauty. Refer to our "Plant Health Care" brochure for more information.

This brochure is one in a series published by the International Society of Arboriculture as part of its Consumer Information Program. You may have additional interest in the following titles currently in the series: • Trees and Disease Problems • Mature Tree Care • New Tree Planting • Trees and Turf • Benefits of Trees • Tree Selection • Plant Health Care • Avoiding Tree and Utility Conflicts • Recognizing Tree Hazards • Why Have an Arborist • Buying High-Quality Trees • Tree Values.

Benefits of Trees



Most trees and shrubs in cities or communities are planted to provide beauty or shade. These are two excellent reasons for their use. Woody plants also serve many other purposes, and it often is helpful to consider these other functions when selecting a tree or shrub for the landscape. The benefits of trees can be grouped into social, community, environmental and economic categories.



Social Benefits

We like trees around us because they make life more pleasant. Most of us respond to the presence of trees beyond simply observing their beauty. We feel secure, peaceful, restful and tranquil in a grove of trees. We are "at home" there. Hospital patients have been shown to recover from surgery more quickly when their hospital room offered a view of trees. The strong ties of people and trees are most evident in the resistance of communities



Downloaded by the International Society of Arboriculture (ISA), a non-profit organization dedicated to the care and preservation of shade and ornamental trees for better environments, contact ISA, P.O. Box 610, Suite 11, 119 N. Spruce St., Fort Collins, CO 80524 USA.

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residents to removing trees to widen streets. Or we note the heroic efforts of individuals and organizations to save particularly large or historic trees in a community.

The stature, strength, and endurance of trees give them a cultural-like quality. Because of the potential for long life, trees are frequently planted as living memorials. We often become personally attached to trees that we or those we love have planted.

Community Benefits

Even though trees may be private property, their size often makes them part of the community as well. Since trees occupy considerable space, planning is required if both you and your neighbors are to benefit. With proper selection and maintenance, trees can enhance and function on one property without infringing upon the rights and privileges of neighbors.

City trees often serve several architectural and engineering functions. They provide privacy, emphasize views or screen out objectionable views. They reduce glare and reflection. They direct pedestrian traffic. They provide backgrounds, or soften, complement or enhance architecture.

Trees bring natural elements and wildlife habitats into urban surroundings; all of which increase the quality of life for residents of the community.

Environmental Benefits

Trees alter the environment in which we live by moderating climate, improving air quality, conserving water and harboring wildlife. Climate control is obtained by moderating the effects of sun, wind, and rain. Radiation energy from the sun is absorbed or reflected by leaves on deciduous trees in the summer and is only filtered by branches of deciduous trees in winter. We are cooler when we stand in the shade of trees and are not exposed to direct sunlight. In winter, we value the sun's radiant energy; and because of this, we should plant only small or deciduous trees on the south side of homes. Wind speed and direction can be affected by trees. The more compact the foliage on the tree or group of trees, the greater the influence of the windbreak. The downward fall of rain, sleet and hail is initially absorbed or deflected by trees and this provides some protection for people.

Buildings, trees intercept water, store some of it, reduce storm run-off and the possibility of flooding. Dew and frost are less common under trees because less radiant energy is released from the soil in those areas at night.

Temperature in the vicinity of trees is cooler than that away from trees. The larger the tree, the greater the cooling. By using trees in the cities, we are able to moderate the heat island effect caused by pavement and buildings in commercial areas.

Air quality can be improved through the use of trees, shrubs and turf. Leaves filter the air we breathe by removing dust and other particulates. Rain washes the pollutants to the ground. Leaves absorb carbon dioxide from the air to form carbohydrates that are used in the plant's structure and function. In this process, leaves also absorb other air pollutants such as ozone, carbon monoxide, and sulfur dioxide and give off oxygen.

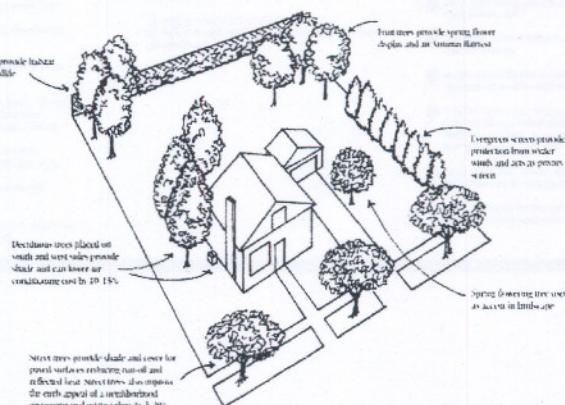
By planting trees and shrubs, we return to a more natural, and less artificial environment. Birds and other wildlife are

attracted to the area. The natural cycles of plant growth, reproduction and decomposition are again present, both above and below ground. Natural harmony is restored to the urban environment.

Economic Benefits

Property values of landscaped homes are 5-20% higher than those of non-landscaped homes.

Individual trees and shrubs have value, but the variability of species, site, condition and function makes determining their economic value quite difficult. The economic benefits of trees can be both direct and indirect.



TREE-MEMBRANCE

TREES...

Trees offer a unique way to honor or remember someone you love and respect. They stand as a *living* tribute to those they honor. Planted now, a tree can live for hundreds of years from today, making your memorial a lasting one for future generations.

TREE-MEMBRANCE

The Tree-membrance Program is a wonderful way to honor a loved one and provide for the whole St. Louis community. Trees in parks benefit everyone. They beautify, shade, and provide comfort. By purchasing and dedicating your tree(s) in a public park, we all can pay tribute to those honored as well as enjoy the comforts of a living and giving tree.

THE TREE YOU DEDICATE

In dedicating a tree-membrance tree, you have a choice of a shade, flowering, or an evergreen tree. Three parks have been set aside for the trees from which you may choose: Forest Park, O'Fallon Park, and Willmore Park. Each park has an overall landscape design, to which we will adhere in locating your tree.

HOW TO DEDICATE YOUR TREE

To obtain your tree-membrance trees, please fill out the attached application and return it to the forestry division. We will review it, making sure that your requests can be met, and place the tree

order with our contracted nursery. The nursery will bill you directly and upon receipt of your payment will notify the forestry division. We will then schedule your tree for the next planting season. To identify your trees upon planting, they will be tagged with a yellow ribbon and an I.D. band. These bands are temporary however, as permanent tags would hinder the growth of the tree.

COST

Costs for trees will vary slightly, depending on the species of tree. Estimated costs are as follows:

Shade Tree, 1"-2" diameter \$50.00
Flowering Tree, 1"-2" diameter.. \$50.00
Evergreen Tree, 4'-6' height ... \$50.00

A CELEBRATION

Every Arbor Day we will celebrate Tree-membrance and recognize those who have participated with an Arbor Day ceremony. Framed certificates, honoring the memorialized person(s) will be presented to the tree-membrance donors. Join us in celebrating tree-membrance!

For more information please call the forestry division at 535-0075

APPLICATION

MEMORIAL TREE: _____ HONORARY TREE: _____

DATE: _____
NAME: _____
ADDRESS: _____
CITY: _____
STATE: _____ ZIP: _____
PHONE: _____

TREE TO BE DEDICATED TO:

NUMBER OF TREE(S): _____

SHADE: _____

FLOWERING: _____

EVERGREEN: _____

PARK LOCATION:

FOREST PARK: _____

O'FALLON PARK: _____

WILLMORE PARK: _____

CERTIFICATE TO BE:

MAILED AFTER PLANTING _____

PRESENTED AT CEREMONY _____

PLEASE DETACH AND SEND TO:

CITY OF ST. LOUIS FORESTRY DIVISION
5800 CLAYTON RD
ST. LOUIS, MO 63110